

PENDING CLAIMS

1. (Previously Presented) A method of selectively disregarding co-channel signals in a communications network, the method comprising the steps of:

initiating a search sequence for a signal with a packet thereon;

receiving the signal;

processing the received signal;

detecting an in-band signal from the processed signal; and

setting an enable restart circuit that responds to a positive in-band power change of the in-band signal and an enable power drop circuit that responds to a negative in-band power change of the in-band signal,

wherein the enable restart circuit and the enable power drop circuit are configured to abort the in-band signal based on inputs to the enable restart circuit and the enable power drop circuit.

2. (Original) The method according to claim 1, wherein processing the received signal includes:

determining a power level of the received signal; and

converting the received signal to a digital signal with a digital packet thereon.

3. (Original) The method according to claim 2, wherein processing the received signal further includes:

performing a quick-drop gain control procedure if the power level of the received signal is above a saturation limit; and

performing a coarse gain drop procedure if the power level of the received signal is within a defined range.

4. (Original) The method according to claim 2, wherein determining the power level includes determining an in-band power level.

5. (Original) The method according to claim 4, wherein determining the in-band power level includes determining a digital packet power of at least a portion of the digital packet.

6. (Original) The method according to claim 5, wherein measuring the digital packet power includes measuring a digital preamble power of at least a portion of a digital preamble of the digital packet.

7. (Original) The method according to claim 4, wherein processing the received signal further includes filtering the digital signal to provide a filtered digital signal with a filtered digital packet thereon.

8. (Original) The method according to claim 7, wherein determining the in-band power level includes determining a filtered digital signal power level of the filtered digital signal.

9. (Original) The method according to claim 8, wherein determining the filtered digital signal power level includes measuring a filtered digital packet power of at least a portion of the filtered digital packet.

10. (Original) The method according to claim 9, wherein measuring the filtered digital packet power includes measuring a filtered digital preamble power of at least a portion of a

filtered digital preamble of the filtered digital packet.

11. (Original) The method according to claim 4, wherein detecting the in-band signal includes identifying a drop in receiver gain resulting from a strong in-band power level.

12. (Original) The method according to claim 11, wherein the drop in receiver gain is a quick-drop if the strong in-band power level exceeds a saturation limit.

13. (Original) The method according to claim 11, wherein the drop in receiver gain is a coarse gain drop if the strong in-band power is within a defined range.

14. (Original) The method according to claim 4, wherein detecting the in-band signal includes:

identifying an increase in the in-band power level that is proportional to an increase in the power level; and
recognizing a correlation exceeding correlation thresholds.

15. (Original) The method according to claim 14, wherein the correlation is cross-correlation.

16. (Original) The method according to claim 14, wherein the correlation is self-correlation.

17. (Original) The method according to claim 16, wherein detecting the in-band signal further includes, before the step of recognizing and after the step of identifying, filling an entire self-correlation viewing window.

18. (Cancelled)

19. (Previously Presented) A method of selectively disregarding co-channel signals in a communications network, the method comprising the steps of:

initiating a search sequence for a signal with a packet thereon;

receiving the signal;

processing the received signal;

detecting an in-band signal from the processed signal; and

activating a signal reception sequence for the detected in-band signal, the signal reception sequence including a selective abort sequence,

wherein the selective abort sequence includes:

aborting the signal reception sequence if a new signal is detected, wherein the new signal is stronger than the detected in-band signal by at least a threshold amount; and

returning to the step of receiving the signal for the new signal.

20. (Previously Presented) A method of selectively disregarding co-channel signals in a communications network, the method comprising the steps of:

initiating a search sequence for a signal with a packet thereon;

receiving the signal;

processing the received signal;

detecting an in-band signal from the processed signal; and

activating a signal reception sequence for the detected in-band signal, the signal reception sequence including a selective abort sequence,

wherein the selective abort sequence includes:

aborting the signal reception sequence if a decrease

in an in-band power measurement of the in-band signal exceeds a delta power decrease limit; and

returning to the step of initiating the search sequence.

21. (Previously Presented) A method of selectively disregarding co-channel signals in a communications network, the method comprising the steps of:

initiating a search sequence for a signal with a packet thereon;

receiving the signal;

processing the received signal;

detecting an in-band signal from the processed signal; and

activating a signal reception sequence for the detected in-band signal, the signal reception sequence including a channel busy suppression,

wherein the channel busy suppression includes:

suppressing a channel busy signal if the in-band signal is determined to include at least one undesirable characteristic; and

returning to the step of initiating the search sequence.

22. (Original) The method according to claim 21, wherein the at least one undesirable characteristic includes one or more of an address and a BSSID.

23. (Previously Presented) A method of selectively disregarding co-channel signals in a communications network, the method comprising the steps of:

initiating a search sequence for a signal with a packet thereon;

receiving the signal;
processing the received signal;
detecting an in-band signal from the processed signal; and
activating a signal reception sequence for the detected in-
band signal, the signal reception sequence including a selective
abort sequence,

wherein aborting is only applied to the inband signal
having packets of a designated type.

24. (Previously Presented) The method according to claim
21, wherein suppressing is applied to the inband signal
regardless of packet type.

25-50. (Cancelled)

51. (Previously Presented) A system for selectively
disregarding signals operating on a common channel, comprising:
a circuit adapted to receive a signal with a packet
thereon, and further adapted to convert the signal to a digital
signal;

a filter section coupled to the circuit, that includes one
or more filters that pass frequency components of the digital
signal within a desired band of frequencies to obtain a filtered
digital signal;

one or more power detectors coupled to the filter section,
for measuring an in-band power of the filtered digital signal;
and

control logic configured to execute a signal reception
sequence if the in-band power levels of the filtered digital
signal exceed one or more threshold values,

wherein the control logic includes an enable restart
circuit that responds to a positive in-band power change of the

filtered digital signal and an enable power drop circuit that responds to a negative in-band power change of the filtered digital signal,

wherein the enable restart circuit and the enable power drop circuit are configured to abort the filtered digital signal based on inputs to the enable restart circuit and the enable power drop circuit.

52. (Original) The system of claim 51, wherein the one or more filters includes a finite impulse filter.

53. (Original) The system of claim 51, wherein the one or more filters includes a decimation filter.

54. (Original) The system of claim 51, wherein the one or more filters includes a low pass filter.

55. (Previously Presented) The system of claim 51, wherein the one or more power detectors include:

a first power detector for measuring the in-band power of a first filtered digital signal; and

a second power detector for measuring the in-band power of a second filtered digital signal.

56. (Previously Presented) The system of claim 51, wherein the control logic includes a means for determining whether the one or more threshold values are exceeded.

57-59. (Cancelled)

60. (Original) The system of claim 51, wherein the control logic includes a means for filtered signal detection that

compares the in-band power of the filtered digital signal to a filtered digital signal power threshold value.

61. (Cancelled)

62. (Previously Presented) The system of claim 51, further including a power storage means for storing the in-band power of the filtered digital signal.

63. (Previously Presented) The system of claim 62, wherein the power storage means is a register configured to store a power profile of at least a portion of a preamble of the filtered digital signal.

64. (Previously Presented) A system of selectively disregarding co-channel signals in a communications network, the system comprising:

means for receiving a signal with a packet thereon;

means for processing the received signal;

means for detecting an in-band signal from the processed signal;

means for activating a signal reception sequence for the detected in-band signal; and

means for selectively responding to positive and negative in-band power changes of the in-band signal, wherein the means for selectively responding is configured to abort the in-band signal based on configurable inputs.

65. (Original) The system according to claim 64, wherein the means for processing the received signal includes:

means for determining a power level of the received signal; and

means for converting the received signal to a digital signal with a digital packet thereon.

66. (Original) The system according to claim 65, wherein the means for processing the received signal further includes:

means for performing a quick-drop gain control procedure if the power level of the received signal is above a saturation limit; and

means for performing a coarse gain drop procedure if the power level of the received signal is within a defined range.

67. (Original) The system according to claim 65, wherein the means for determining the power level includes a means for determining an in-band power level.

68. (Original) The system according to claim 67, wherein the means for processing the received signal further includes a means for filtering the digital signal to provide a filtered digital signal with a filtered digital packet thereon.

69. (Original) The system according to claim 67, wherein the means for detecting the in-band signal includes a means for identifying a drop in receiver gain resulting from a strong in-band power level.

70. (Original) The system according to claim 69, wherein the drop in receiver gain is a quick-drop if the strong in-band power level exceeds a saturation limit.

71. (Original) The system according to claim 69, wherein the drop in receiver gain is a coarse gain drop if the strong in-band power is within a defined range.

72. (Original) The system according to claim 67, wherein the means for detecting the in-band signal includes:

means for identifying an increase in the in-band power level that is proportional to an increase in the power level; and

means for recognizing a correlation exceeding correlation thresholds.

73. (Previously Presented) The system according to claim 64, wherein the means for selectively responding includes:

means for aborting the signal reception sequence if a new signal is detected, wherein the new signal is stronger than the detected in-band signal; and

means for returning to the step of receiving the signal for the new signal.

74. (Previously Presented) The system according to claim 64, wherein the means for selectively responding includes:

means for aborting the signal reception sequence if a new signal is detected, wherein the new signal is stronger than the detected in-band signal by at least a threshold amount; and

means for returning to the step of receiving the signal for the new signal.

75. (Previously Presented) The system according to claim 64, wherein the means for selectively responding includes:

means for aborting the signal reception sequence if a decrease in an in-band power measurement of the in-band signal exceeds a delta power decrease limit; and

means for returning to the step of initiating the search sequence.

76. (Previously Presented) The system according to claim 64, wherein the means for processing includes:

means for suppressing a channel busy signal if the in-band signal is determined to have at least one undesirable characteristic; and

means for returning to the step of initiating the search sequence.

77. (Original) The system according to claim 76, wherein the at least one undesirable characteristic includes one or more of an address and a BSSID.

78. (Previously Presented) The system according to claim 76, wherein the means for aborting is only applied to the in-band signal having packets of predetermined type.

79. (Previously Presented) The system according to claim 76, wherein the means for suppressing is applied to the in-band signal regardless of packet type.

80-88. (Cancelled)